

SUPPORT DOCUMENT

for the Air Operating Permit issued to

**Weyerhaeuser-Cosmopolis Pulp Mill
P. O. Box 1000
Cosmopolis, WA 98537**

State of Washington
DEPARTMENT OF ECOLOGY
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INTRODUCTION

This Operating Permit Support Document fulfills the operating permit rule "Statement of Basis" requirement and explains particular portions of the air operating permit for the Weyerhaeuser-Cosmopolis Pulp Mill.

This document is not part of the operating permit for Weyerhaeuser-Cosmopolis Pulp Mill. Nothing in this document is enforceable against the permittee, unless otherwise made enforceable by permit or order.

STATEMENT OF BASIS

When the Department of Ecology issues a draft operating permit, it is required to provide a statement that sets forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions, [WAC 173-401-700(8)].

ASSURING COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS

An operating permit must contain terms and conditions that assure compliance with all applicable requirements at the time of permit issuance, [WAC 173-401-600(1)]. Certain permit conditions impose a single emission limit or requirement that is based on two or more underlying applicable requirements. The table in Appendix A to this Support Document presents the basis for consolidating these multiple requirements into single permit conditions. Appendix B shows graphs of the particulate emission data for the recovery and hogged fuel boiler furnaces. An example of the monthly air emission report is included in Appendix C of this support document.

Compliance with the conditions in the permit is deemed to constitute compliance with applicable requirements as contained in the permit on which the terms and/or conditions are based, as of the date that the permit is issued. [WAC 173-401-640(1).] The Department of Ecology has determined that the requirements listed in Appendix A to the permit do not apply to the facility, as of the date the permit is issued, for the reasons specified. [WAC 173-401-640(2)]. Not all of the inapplicable requirements are listed in Appendix A. Requirements that were considered obviously inapplicable were excluded from the list of inapplicable requirements. Appendix C of the permit contained the abbreviations used in the permit.

Regulatory orders

Copies of the state regulatory orders that impose limitations and requirements on the permittee are provided in Appendix D of the permit. The permittee is subject to four regulatory orders. Order DE 95AQ-I034 was issued to consolidate all previous requirements from past state approvals, orders and letters. The three other orders are notices of construction for the paint booth (Order DE 94AQ-I002), the oxygen bleaching stage (Order DE 94AQ-I018), and the concentrated oxygen extraction liquor project (Order DE 96AQ-I089). A majority of the most stringent emission limits for the facility are contained in these orders. These orders established source specific limitations, but also include default limitations established by state regulations. These orders are not intended to be a separate legal source for default limitations that are based in state regulations. Therefore, for limits derived directly from state regulations

that were included in these orders are considered to be the “applicable requirement” for purposes of Title V. Consequently, the permit does not cite the orders as an applicable requirement for regulatory limits; for these limits, the permit cites only the regulation as the underlying applicable requirement.

Alternate operating scenario

The permittee did not request any other alternate operating scenario; and therefore, WAC 173-401-650 becomes an inapplicable requirement.

MACT Standards

The permittee may be regulated by the 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants for Source Categories when they become effective. If the MACT regulations are effective before the final permit is issued, the requirements will be placed in the permit. If the permit is issued before the MACT standards are effective, the necessary changes will be made in the permit to fulfill the MACT requirements when the permit is modified or reissued.

Application

Ecology received a complete application prior to April 20, 1998. Therefore, the Compliance Assurance Monitoring (CAM) rules will be applicable in the next permitting issuance period or if a significant permit modification is made prior to renewal affecting a pollutant specific emission unit with potential to emit greater than major source thresholds

General mill processes

The Weyerhaeuser Company's pulp mill at Cosmopolis was built in 1957 as a magnesium based paper grade sulfite mill and converted into a dissolving grade pulp mill in 1962. In other words they produced chemical cellulose pulp using sulfur dioxide with the magnesium ions used as the basic buffering agent while cooking the pulp in nine digesters. The pulp is washed with counter current washers. The liquids-- known as the weak red liquor-- from the washing of the pulp in the first five stages are collected, evaporated, and sent to the recovery furnace to be burned. The recovery system recaptures the spent materials (magnesium oxide and sulfur dioxide) used in pulping to make more pulp and produces part of the energy necessary to produce the pulp. The magnesium oxide is captured by multi clones while the sulfur dioxide is captured by an absorber scrubber. A hogged fuel boiler is used to produce the rest of the energy needed. Particulate matter is removed from the hogged fuel boiler emission by a venturi scrubber. The company operates a hogged fuel dryer to conditioned the hogged fuel before introduction into the hogged fuel boiler. Three cyclones are used to control the particulate from the dryer. The company produces about 460 tons of pulp per day. The company sells the chemical pulp to companies that processes it into cigarette filters, plastics products, photographic paper, and hygiene products. Beside the emissions from the aforementioned hogged fuel boiler and recovery furnace, the mill emits air pollution from the pulping and bleaching processes.

Notices of constructions

The air permit include the combined operating order issued in 1995 and a notices of construction (NOC) for the paint booth, the oxygen bleaching system, and the concentrated oxygen extraction liquor (COEL) project. The COEL project is under construction and will be completed in the fall of 1998. The only requirement in the COEL's NOC is that a cross over pipe was required to be constructed so that the VOC from the evaporators could continuously be burned while operating. The final inspection of the project will confirm that this cross over pipe is constructed and operational.

Mill site plan

A mill site plan and general process flow diagram are provided in Appendix C of this document.

Recovery area

The recovery area supports the pulping and bleaching processes. The recovery area recovers sulfur dioxide and magnesium oxide, generates steam, and regenerates the SO₂-enriched magnesium bi-sulfite cooking liquor. Primary feedstock for these operations is the spent cooking liquor (weak red liquor), which contains not only the cooking chemicals but also the wood constituents extracted during the cook.

The chemical recovery system at the mill consists of evaporators to concentrate the weak red liquor, recovery boilers to burn the red liquor to recover magnesium as an oxide and the acid plant to recover sulfur as SO₂. Weak red liquor comes from the brown stock washers to holding tanks and then to the evaporators to concentrate the extracted wood constituents for combustion in the recovery furnaces. The recovery furnaces utilize the heating value of the extracted wood constituents to generate steam while liberating the magnesium oxide and sulfur dioxide from the spent cooking liquor. The magnesium oxide is captured by multicyclones serving the boilers, and the acid plant to absorb SO₂ in the boiler flue gases with MgOH. Ancillary facilities provide makeup MgO from truck delivery and SO₂ from burning molten sulfur, also delivered by truck and stored in a steam-heated tank.

Evaporators

The weak red liquor tanks at the recovery area receive red liquor from the brown stock washers. Substantial evaporation of the water in this stream must be accomplished in order to concentrate the liquor, known as heavy red liquor, for burning.

The evaporators are isolated from ambient air by barometric legs and sealpots. Condensate is routed to a central, vented tank and pumped from the tank to the effluent treatment system where it enters the bioponds. Noncondensable gases (NCG) are normally vented to the acid plant. The COEL project will eliminate this emission. Steam eductors (hogging jets) are used during startup and upset conditions. These jets exhaust to the atmosphere.

Biosolids

Biosolids are coprocessed with red liquor as part of an overall biosolids project for the mill. The biosolids are centrifuged to achieve the desired solids content and can be mixed with the red liquor in the evaporation plant.

Recovery Boilers

There are three recovery boilers at the site. Boilers Nos. 1 and 2 are the original recovery units for the mill (1957). They are rated at 860 psi and 825°F. Boiler No. 3 is a newer (1966) boiler also rated at 860 psi and 825°F.

The heavy red liquor is sprayed into the boiler furnace, where the combustibles in the red liquor and biosolids burn. Additionally, the recovery boilers burn oil to supplement the boiler operations. There are periods of time where a recovery boiler may operate on oil only. This occurs when there is either a shortage of liquor available to burn or to meet other process demands. The mill uses oil to start the boilers.

The magnesium compounds in the liquor are converted to MgO, and sulfur compounds are converted to SO₂. Multicyclones capture the MgO from the flue gas and the MgO is routed to the washing/slaking process. The boiler flue gases are then ducted to the acid plant for SO₂ recovery and further particulate removal. Steam from the recovery boilers enters a common header shared also by the power boiler.

Acid Plant

After exiting the multicyclones, flue gases from boilers Nos. 1 and 2 enter separate cooling towers, three SO₂ absorption towers in series, and associated I.D. fans. They are then combined and directed to a common eductor venturi scrubber with a single discharge stack. Boiler No. 3 flue gases go through an I.D. fan to a dual-purpose flue gas cooler/cyclone evaporator, then through three venturi SO₂ absorbers in series, an absorption tower, and then to the common educted venturi scrubber. The absorption towers receive Mg(OH)₂ from the slaking tanks combined with Mg(OH)₂ from a makeup storage tank. The two sulfur burners are used to augment the sulfur dioxide.

Opacity and particulate limits

Monthly particulate source testing has been imposed on the combined recovery stack through orders for controlling emissions. From seven years of particulate stack tests, the probability of exceeding the particulate limit, given the amount of emission monitoring and the control configuration, is very low. The result of the seven years of stack tests showed that 95 percent of the Method 5 particulate test results were less than 75 percent of the particulate limit. Ecology considers that the monthly particulate test frequency is sufficient to indicate continuous compliance. A summary of the historical emissions testing results which served as the basis for determining the frequency of monitoring is included in this document as Appendix B.

Although there is only a small probability that the recovery furnace would be out of compliance between monthly DOE Method 5 stack tests, a minimum operational condition is placed in the permit to show that the pollution control device is operating. A minimum operating condition is placed in the permit for the

recovery furnaces recirculating pumps as an independent condition. The minimum condition for showing good practice of operation is; "During pump maintenance, one of the pumps may be out of service for periods no greater than 72 hours. The permittee will be in violation of the permit, if more than one pump is out of service at any one time or if the non-operating pump is out of service for greater than 72 hours." The absorption tower's circulating pump's operation requirement is only applicable when burning spent sulfite liquors and/or wastewater treatment secondary sludges in the respective recovery furnace No. 1, No. 2, and/or No. 3. Normally one would expect that a pressure drop or flow would be required to show that the pumps are actually pumping. On this pumping system the recirculation pumps are used to control sulfur dioxide that has a concentration limit. There are nine recirculation pumps. There is one recirculation pump for each absorption tower for each boiler. The company would not run for extended period of time with one pump down. The company could not make the required strength cooking acid with one pump was down for an extended time. If the pumps are not circulating magnesium hydroxide, the sulfur dioxide concentration would increase. Since, the sulfur dioxide concentration from the recovery furnace is measured continuously, an inoperative pump would be notice immediately. Therefore, monitoring if the pumps are operating is sufficient to determine minimum operation condition for particulate. Once per shift the operator shall take and record visual readings of how many pumps are in service. Within this 72 hours period, the permittee shall take appropriate action to correct the minimum operational parameter exception and record the action taken. Failure to take corrective actions and/or document it is a violation of the permit. The permittee shall report all exceptions and the corrective actions taken monthly on the monthly air emission report.

The permittee also controls opacity with the absorption tower. Because the resulting plume is wet, an opacity monitor will not work. Therefore, a continuous minimum operational parameter for opacity monitoring was placed in the regulatory order through a biparty agreement. [WAC 173-410-062(5)]. The agreed to parameter is the same as the minimum operating condition as described above for particulate. Method 9 opacity readings may be used if the minimum operational parameter is out of the prescribed operating value to over ride the minimum operational parameters results or the permittee must bring the system back in to the prescribed minimum operating value within 72 hours.

Sulfur dioxide limit

The company had a sulfur dioxide limit of 800 ppm for the recovery stack prior to 1985. The 800 ppm sulfur dioxide limit was federally enforceable. In August 1985 the company exceeded the ambient sulfur dioxide standard. During this time period, the company performed modeling for sulfur dioxide and constructed a scrubber with a single stack emission point. As a result of the modeling, Ecology issued an order under RCW 70.94.332 with a limit of 360 ppm. This limit provided protection for violation of the ambient sulfur dioxide standards, chapter 173-474 WAC. The modeling and construction of the scrubber were both done under a compliance order issued under chapter 173.474 WAC. Since chapter 173-474 is not part of the SIP, the 360 ppm limit is not federally enforceable and is segregated in the permit as state only. Both the 360 ppm limit as state only and the 800 ppm limit as federally enforceable are included in the permit.

Hogged fuel boiler area

Process Description

The power boiler area includes the fuel dryer and its associated fuel yard and fluidized bed burner, a pulverizer for wood fines, the power boiler (fueled by wood residuals and oil), and two steam turbine-generator sets.

Power Boiler

The boiler has an integral air preheater. It is equipped with multicyclone collectors with separating screens and fly ash reinjection. It uses a venturi scrubber with a mist elimination section for particulate emission control. The boiler also is equipped with an alternate stack allowing the scrubber to be bypassed for repair.

The power boiler can burn wood residuals, including but not limited to, reject knots/fiber, dried hogged fuel, undried hogged fuel, pressed hogged fuel, and hogged fuel dust. The power boiler also uses oil for supplemental firing, or startup firing, or stand-alone fuel if hogged fuel is unavailable. Oil includes, but is not limited to, residual oil, distillate oil, on-spec used oil, and oil spill materials generated on or off the mill. The boiler is also able to use propane as an ignitor or pilot fuel for the burners on startup and can be used for the combustion of miscellaneous combustible nonhazardous general wastes. Oil is also used as the startup fuel for the hogged fuel dryer to get it up to temperature prior to introducing hogged fuel.

The power boiler shares a common steam header with the recovery boilers. This steam header feeds the integrated steam system, which includes two turbine-generator sets and two pressure-reduction stations. The turbine generator sets are available for optional operation to supplement the mill power needs and provide emergency power in the event of a service outage. Both pressure reduction stations and turbine steam extractions are used to provide two different pressure sources of process steam.

Opacity and particulate limit

Particulate tests on the hogged fuel boiler were performed six times in 1995 and 1996. The results of these tests showed the particulate averaged about 52 percent of the limit defined in the permit. Ecology considers that monitoring yearly sufficient to indicate continuous compliance. A summary of the historical emissions testing, that served as the basis for determining the frequency of monitoring is included in this document in Appendix B.

There is only a small probability that the unit would be out of compliance with DOE Method 5 stack test. An independent minimum operating condition is placed in the permit to monitor continuous operations of the device. The minimum condition is defined as follows: "The permittee shall continuously monitor and record flow and pressure drop across the hogged fuel boiler's scrubber. The hogged fuel boiler scrubber's flow and pressure drop (Δp) shall be maintained greater than or equal to 605 gallon/minute and 10 inches of water, respectively, to show continuous operation of the pollution control system." The permittee shall take corrective action as soon as practical to bring the minimum operational parameter back into its normal range or performed the applicable DOE test method to show compliance with the permit condition. Failure to take corrective actions is a violation of the permit limit. The permittee shall report all exceptions and the corrective actions taken on the monthly air report.

Hogged Fuel Dryer Area

Process Description

Hogged fuel purchased offsite for the boiler and onsite wood fuels are typically dried by a Stearns-Roger rotary drum fuel dryer. The fuel dryer was installed in 1974 with the goal of improving power boiler efficiency. The dryer is heated by the exhaust from a fluidized bed combustion (FBC) unit. During startup, the fluidized bed is brought up to temperature by burning diesel. This temperature-control step ensures the bed is at the operating level prior to introducing wood residual fuel to the fluidized bed or hogged fuel to the dryer drum. The devices for the pollution control on the hogged fuel dryer are three cyclones.

Particulate and opacity limits

During the writing of the permit, the permittee performed DOE method 5 particulate tests on the hogged fuel dryer. The tests showed that the unit was on the borderline of being in compliance. Because the company realized that the unit was deteriorating, they initiated repairs to the pollution control device. The repaired of the cyclones for this unit was completed in the fall of 1997. Testing to ensure compliance is still continuing. With the repairs completed on the unit, the particulate is well below the limit. In order to find a minimum operating condition for the system, a two-year study will be performed. This study will investigate for parameters indicative of continuous operation of the pollution control device to remove particulate and opacity.

Under the monitoring requirements in the permit, the permittee shall find a minimum operational parameter to indicate continuous operations of the pollution control device. A minimum operating condition for the hog fuel dryer shall only indicate continuous operations of the pollution control device. The permittee will be required to find one or more operating parameters to indicate continuous operations of the pollution control device and report the result within two years of the effective date of the permit to Ecology. One example of an operating parameter is measuring the temperature increase through cyclone no.'s 3, 2, and 1 and performing DOE method 9A and DOE method 5. After the study, the permit may be modified to require the permittee to continuously monitor the minimum operating parameter(s). The minimum operating parameters can only be used to indicate that the pollution control equipment is being operated during times when the opacity or particulate tests are not being performed.

Sulfur dioxide monitoring for hogged fuel boiler and dryer

From calculations done in sections A and B below, the hogged fuel boiler and the hogged fuel dryer will always be in continuous compliance with the sulfur dioxide emission limit of 1,000 ppm, if these units, burns oil with less than two percent sulfur, diesel and/or wood. Therefore, the permittee will be required to record the sulfur content of the fuel oil used in the units and certify that from January 1 until December 31 of each year, all fuel consumed in the units had a sulfur content of less than 2 percent. The certification of the sulfur content must be submitted with the January's monthly air emission report

A. Permit Conditions B.1.b. and C.1.a - sulfur dioxide minimum operating parameter for hogged fuel boiler

The calculated sulfur dioxide concentration is calculated as follows:

$F_d = 9190 \text{ dscf/MMBtu}$ for residual oil ("F" factor from 40 CFR, Part 60, App. A, Method 19)

$$C_d = \frac{(.02 \text{ lb S/lb oil})(2 \text{ lb SO}_2/\text{lb S})(385 \text{ dscf SO}_2/64 \text{ lb SO}_2)}{(19,309 \text{ Btu/lb oil})(9190 \text{ dscf/MMBtu})(\text{MMbtu}/10^6 \text{ BTU})}$$

Therefore, $C_d = .001356 \text{ dscf SO}_2/\text{dscf flue gas} = 1356 \text{ ppmv SO}_2$

$$\text{Corrected to 7\% excess O}_2: (1356 \text{ ppmv SO}_2) \times \frac{20.9 - 7}{20.9} = 901 \text{ ppmv SO}_2$$

The sulfur dioxide limit of 1000 ppm will always be met if the permittee uses fuel oil with less than 2 percent sulfur. Therefore, continuous monitoring is not required to show continuous compliance. Instead of continuous monitoring for sulfur dioxide the permittee is required to certify that the fuel oil has less than 2 percent sulfur content

B. Permit Condition B.1.b. and C.1.a - sulfur dioxide minimum operational for the hogged fuel dryer

For the hog fuel dryer using wood in the fluidized bed, the sulfur content of the wood is 0.031 lbs. S/BDT. The sulfur dioxide calculations for dried wood are:

$F_d = 9240 \text{ dscf/MMBtu}$ for residual oil ("F" factor from 40 CFR, Part 60, App. A, Method 19)

$$C_d = \frac{(.031 \text{ lb S/BDT wood})(\text{ton}/2,000 \text{ lbs})(2 \text{ lb SO}_2/\text{lb S})(385 \text{ dscf SO}_2/64 \text{ lb SO}_2)}{(8800 \text{ Btu/lb BDT wood})(9240 \text{ dscf/MMBtu})(\text{MMbtu}/10^6 \text{ BTU})}$$

Therefore, $C_d = 0.000002 \text{ dscf SO}_2/\text{dscf flue gas} = 2 \text{ ppmv SO}_2$

The sulfur dioxide limit of 1000 ppm will always be met if the permittee uses wood. Continuous monitoring for sulfur dioxide is not required nor is the certification of the percent sulfur in the wood required, since while burning wood there is no chance of exceeding the 1000 ppm sulfur dioxide limit.

For the hog fuel dryer using diesel in the fluidized bed, the sulfur content of the diesel is 0.5 percent. The sulfur dioxide calculations for diesel are:

$F_d = 9190 \text{ dscf/MMBtu}$ for residual oil ("F" factor from 40 CFR, Part 60, App. A, Method 19)

$$C_d = \frac{(.005 \text{ lbs. S/lbs oil})(2 \text{ lb SO}_2/\text{lb S})(385 \text{ dscf SO}_2/64 \text{ lb SO}_2)}{(19,309 \text{ Btu/lb oil})(9190 \text{ dscf/MMBtu})(\text{MMbtu}/10^6 \text{ BTU})}$$

Therefore, $C_d = 0.000003 \text{ dscf SO}_2/\text{dscf flue gas} = 3 \text{ ppmv SO}_2$

The sulfur dioxide limit of 1000 ppm will always be met if the permittee uses diesel fuel oil with 0.5 percent sulfur. Neither continuous monitoring for sulfur dioxide nor the certification of the

percent sulfur in the diesel fuel is required, since while burning diesel, there is no chance of exceeding the 1000 ppm sulfur dioxide limit.

Mill Emissions

Conditions: **G.** -- Mill emissions, does not include the sulfur dioxide emissions from the hogged fuel boiler dryer or the hogged fuel boiler. Condition G does include the sulfur dioxide emissions from all SARA Title 304 releases, the recovery boiler's combined stack, the nuisance tower vent, No.'s. 1, 2, 3, and 4 brown stock washers' and deknotters vents, number 4 filtrate tank vent, north and south weak red liquid tank vent, condensate day tank and stand pipe, CE and ME hogging jet vents, No.'s 1, 2, and 3 heavy liquor vent tanks, and condensate tank over flow sump. Conditions A through G provide for continuous monitoring either with the use of continuous monitors, minimum operational parameters, process knowledge, and/or emission factors for all individual units.

The permittee shall show compliance with condition 25 of the permit (sulfur dioxide less than 1,000 ppm for an hourly average) by emissions factors and/or process knowledge of the individual emission points.

Permit condition D.2. - Opacity of oxygen blow tank vent

The oxygen blow tank vent is an uncontrolled emission point source. The system uses oxygen to bleach the pulp. The pulp is wet during this process. The only chemicals emitted by the oxygen blow tank vent are water vapor and VOC's. Water vapor is exempt from opacity observations. The VOC compounds are colorless vapors and are at very low concentration. The VOC compounds do not appear to condense and do not produce any opacity. Therefore, no monitoring for opacity is required to show compliance because of the nature of the source. The VOC limit is based on emission factors. The 34 tons VOC per year was based on a production of 624 air-dried unbleached short tons/day. The permittee shall record and report the daily production of pulp each month on the monthly air emission report.

Time period for bringing operating parameters to predetermined values.

The definite period of time was not specified since in some cases the permit will require a shorter or longer time period for individual exceptions than could be foreseen by the permit. By defining a definite time period one would be lengthening the required time in certain cases. In other cases, the permittee may need more time to complete some unforeseen breakdown. Therefore, Ecology will give the individual project officer the flexibility to determine the definition of the shortest period of time on a case by case basis when all the facts are known for each individual exception.

Insignificant Emission Units

The facility-wide general requirements apply to the whole facility, including insignificant emission units and activities (IEUs), as required by the operating permit rule. The rule states, however, that IEUs are not subject to monitoring requirements unless the generally applicable requirements in the State

Implementation Plan (SIP) impose them [WAC 173-401-530(2)(c)]. The state SIP does not impose any specific monitoring-related requirements for the facility-wide requirements for IEUs at this source. The permit, therefore, does not require any testing, monitoring, reporting, or record keeping for insignificant emission units or activities.

Appendix A

Certain permit conditions impose a single emission limit or requirement that is based on two or more underlying applicable requirements. This table presents the basis for consolidating these redundant requirements into single permit conditions.

Limit #	Underlying Applicable Requirements -- Cite and Paraphrase of Requirement	Basis for Consolidating
A.1	Order DE 95AQ-I034: particulate limit for Recover Furnaces' Boiler No.1, No. 2, and No. 3 is 0.10 gr/dscf @ 8% O ₂ ; DOE Method 5. WAC 173-410-040(2)(a): emissions of particulate from recovery system constructed before January 24, 1972 shall not exceed 0.23 gram. per dry cubic meter of exhaust at standard conditions (0.10 gr/dscf) corrected to 8% O ₂ .	Both limits are the same. The permit imposes the regulations limit of 0.10 gr/dscf. The limit is federally enforceable.
A.2.	Order DE 95AQ-I034: The opacity for Recover Furnaces' Boiler No.1, No. 2, and No. 3 shall average less than 35 percent for any (6) consecutive minutes in any one hour period. WAC 173-410-040(3): No person shall cause or allow the emission of a plume from a recovery system or acid plant which has an average opacity greater than thirty five percent, for more than six consecutive minutes in any one sixty minute period, except as allowed per RCW 70.94.331(2)(c). WAC 173-410-062(5) Each mill shall be required to establish a program approved by ecology for continuous opacity monitoring to demonstrate compliance with WAC 173-410-410(3) and report the results to ecology in a format and on a schedule set by regulatory order. If equipment for continuous monitoring of opacity is not available, continuous monitoring of operating parameters may be required as an alternate until continuous opacity monitoring equipment is available.	Both limits are the same. The permit imposes the regulations limit of 35 %. However, WAC 173-410-040(3) is part of the state implentation plan and is therefore federally enforceable. The alternate opacity regulation is also part of the SIP and therefore is federally enforceable. The exception to WAC 173-410-040(3) is not part of the SIP but the 35 percent limit is according to CFR 40 Part 52.

A.3.	WAC 173-410-040(1)(d) Emissions from the recovery system and acid plant shall not exceed 800 ppm of sulfur dioxide for any hourly average.	The 360 ppm limit is the most stringiest and placed in the permit.
A.4.	Order DE 95AQ-I034:sulfur dioxide limit for Recovery Furnaces No. 1, No. 2, and No. 3 boilers' stack is 360 ppm.	The 800-ppm sulfur dioxide limit is federally enforceable. Permit imposes the 360 ppm limit for sulfur dioxide from Order DE 95AQ-I034. The 360 ppm limit is not federally enforceable so the 800 ppm limit is also placed in the permit. If the permittee meets the 360 ppm limit they will also meet the 800 ppm. The required monitoring is the same for both limits.
A.5.	WAC 173-410-040(5): No recovery system shall emit total reduced sulfur (TRS) gases in excess of 17.5 ppm for a daily average	Permit imposes the 17.5-ppm daily average limit into the permit. However, WAC 173-410-040(5) is not part of the state implementation plan. Therefore, the limit on TRS is not federally enforceable and is listed as state only.
B.1.	Order DE 95AQ-I034: The opacity shall average less than 20 % for any consecutive three minutes period in any one hour. WAC 173-400-040(1): No person shall cause or permit the emission for more than three minutes, in any one hour of an air contaminant from any emission unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity ...:	Both are the same. The permit imposes the regulation limit of 20 percent. The limit is federally enforceable. The minimum operational parameter is to be used as an indicator of continuous operations of the pollution control equipment. The limit is federally enforceable.

B.2.	<p>Order DE 95AQ-I034: Sulfur dioxide shall be less than 1000 ppm uncorrected for oxygen.</p> <p>WAC 173-410-040(1)(f): Emission from any emission unit, other than a recovery system, a blow system or an acid plant, shall not exceed 1000 ppm sulfur dioxide, corrected to seven percent oxygen in case of combustion unit, for an hourly average.</p>	<p>The system is not considered as a combustion source totally. It uses wood to heat air that is used to dry hogged fuel. Air is brought in from the outside to condition and cool the flue gases to operational levels. Therefore, correction to 7 percent oxygen does not apply as per WAC 173-410-040(f). The sulfur dioxide value would be indeterminate with the oxygen correction. The permit imposes 1000 ppm order limit uncorrected for oxygen. The limit in Order DE 95AQ-I034 is the same as WAC 173-410-040(1)(f) limit. Therefore, the permit imposes the regulation limit of 1,000 ppm sulfur dioxide uncorrected for oxygen. The limit is federally enforceable.</p>
B.3.	<p>Order DE 95AQ-I034: Particulate shall be less than 0.1 gr/dscf uncorrected for oxygen.</p> <p>WAC 173-410-040(2)(c)(iii) The emission of particulate from emissions units other than acid plant or recovery system shall not exceed the following maximums:</p> <p>(iii) 0.23 grams/dry cubic meter at standard conditions (0.1 gr/dscf) corrected to seven percent oxygen in case of combustion units, for units not classified under (c) (i) or (ii) of this section.</p>	<p>The system is not considered as a combustion source totally. It uses wood to heat air that is used to dry hogged fuel. Air is brought in from the outside to condition and cool the flue gases to operational levels. Therefore, correction to 7 percent oxygen does not apply as per WAC 173-400-050(3) since the sulfur dioxide limit could be indeterminate with the oxygen correction. The permit imposes the limit from the order of 0.1 gr/dscf uncorrected for oxygen. The limit is federally enforceable.</p>
C.1.	<p>Order DE 95AQ-I034: sulfur dioxide shall be less than 1,000 ppm @ 7 % O₂</p> <p>WAC 173-410-040(1)(f): Emission from any emission unit, other than a recovery system, a blow system or an acid plant, shall not exceed 1000 ppm sulfur dioxide, corrected to seven percent oxygen.</p>	<p>Both are the same. The permit imposes the regulation limit of 1,000 ppm corrected to 7 % O₂. The limit is federally enforceable.</p>

C.2.	Order DE 95AQ-I034: The opacity shall average less than 20 % for any consecutive three minutes period in any one hour. WAC 173-400-040(1) No person shall cause or permit the emission for more than three minutes, in any one hour of an air contaminant from any emission unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity ...:	Both are the same. The permit imposes the regulation limit of 20 percent. The limit is federally enforceable.
C.3.	Order DE 95AQ-I034: Particulate shall be less than 0.1gr/dscf corrected to oxygen WAC 173-410-040(2)(c)(iii): The emission of particulates from emissions units other than acid plant or recovery system shall not exceed the following maximums: (iii) 0.23 grams/dry cubic meter at standard conditions (0.1 gr/dscf) corrected to seven percent oxygen in case of combustion units, for units not classified under (c) (i) or (ii) of this section.	Both are the same. The permit imposes the regulation limit of 0.1 gr/dscf . The limit is federally enforceable.
D.1.	Order DE 94AQ-I018: Volatile organic compounds (VOC) shall be less than 34 tons VOC on a carbon basis /year.	The order limit is considered BACT and TBACT. Therefore, the permit imposes the order limit for VOC toxic and non-toxic. The limit is federally enforceable.
D.2.	Order DE 94AQ-I018: Opacity shall average less than 10 % for any consecutive six (6) minutes period for any one hour.	The order limit is considered BACT and TBACT. Therefore, the permit imposes the order limit for opacity. The limit is federally enforceable.
E.1.	Order DE 94AQ-I002: Opacity shall average less than 5 % for any consecutive six (6) minutes period for any one hour.	The order limit is considered BACT and TBACT. Therefore, the permit imposes the order limit for opacity. The limit is federally enforceable.
E.2.	Order DE 94AQ-I002: Volatile organic compounds (VOC) shall be less than 1160 tons VOC on a carbon basis /year.	The order limit is considered BACT and TBACT. Therefore, the permit imposes the order limit for VOC toxic and non-toxic. The limit is federally enforceable.

G.1.	Order DE 95AQ-I034: The mill emission of sulfur dioxide shall not exceed 20 lbs./ADUT on a daily average. WAC 173-410-040(1)(a): The total average daily emissions from a sulfite pulping mill, or portion of a sulfite pulping mill which practices incineration of the spent sulfite liquor, shall not exceed ten grams of sulfur dioxide per kilogram (20 lbs./ton) of air dried bleached pulp produced.	Both are the same. The permit imposes the regulation limit of 20 LBS./ ADUT. The limit is federally enforceable.
WAC 173-410-040 Emission standards. In addition to the general applicability of chapters 173-400 and 173-490 WAC to all emission sources; no sulfite pulping mill shall cause or permit air contaminant emissions in excess of the limits listed below. Specific emission standards listed in this chapter will take precedence over the general emission standards of chapter 173-400 WAC.		

Facility-Wide General Requirements

9.	This condition consists of two separate statements. Compliance with the minimum operational parameters defined in the permit does not relieve the permittee from its obligation to comply with this condition.
10.	This condition consists of two separate statements. The first paragraph is a repetition of the cited regulation. The second part is based on what Ecology considers and unlikely but possible scenario where recorded monitoring data is simply lost. Ecology will allow a 95% recovery rate for monitoring data if the permittee provides an adequate explanation for the cause of the lost data. Ecology expects the permittee to make every reasonable effort to maintain the integrity of all monitoring results. An allowance is specified for missing monitoring results under certain conditions are no defined as violations, thus reducing the administrative burden on the and permitting authority.